

Cryptoverse: A Cryptocurrency Dashboard

Ideation Phase

Brainstorm & Idea Prioritization

Date	
Team ID	SWTID1741267500153911
Project Name	Crypto-verse
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization Template:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

Reference: <https://www.mural.co/templates/brainstorm-and-idea-prioritization>

Step-1: Team Gathering, Collaboration and Select the Problem Statement

The template interface is a 3x3 grid of cards:

- Top Left Card:** Features a lightbulb icon and the title "Brainstorm & idea prioritization". Below it, text says: "Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room." It includes a summary: "10 minutes to prepare, 1 hour to collaborate, 2-8 people recommended".
- Top Middle Card:** Step 1: "Before you collaborate". It says: "A little bit of preparation goes a long way with this session. Here's what you need to do to get going." It includes a timer icon: "10 minutes".
- Top Right Card:** Step 1: "Define your problem statement". It says: "What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm." It includes a timer icon: "5 minutes".
- Middle Left Card:** Step A: "Team gathering". It says: "Define who should participate in the session and send an invite. Share relevant information or pre-work ahead." Step B: "Set the goal". It says: "Think about the problem you'll be focusing on solving in the brainstorming session." Step C: "Learn how to use the facilitation tools". It says: "Use the Facilitation Superpowers to run a happy and productive session." It includes a "Open article" button.
- Middle Middle Card:** A box labeled "PROBLEM" containing the text: "How might we [your problem statement]?"
- Middle Right Card:** A box labeled "Key rules of brainstorming" with the subtext: "To run an smooth and productive session". It lists 6 rules with icons:
 - Stay in topic.
 - Defer judgment.
 - Go for volume.
 - Encourage wild ideas.
 - Listen to others.
 - If possible, be visual.

Step-2: Brainstorm, Idea Listing and Grouping

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

⌚ 10 minutes

TIP

You can select a sticky note and hit the pencil [switch to sketch] icon to start drawing!

Person 1

Person 2

Person 3

Person 4

Display real-time cryptocurrency prices, trends, and charts using third-party APIs.

Allow users to add and track their crypto holdings with historical performance visualization.

Enable users to convert between different cryptocurrencies and fiat currencies.

Fetch and display crypto-related news updates to help users make informed decisions.

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

⌚ 20 minutes

TIP

Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

Real-Time Data & Analytics

User Portfolio Management

Market Insights & News

Step-3: Idea Prioritization

4

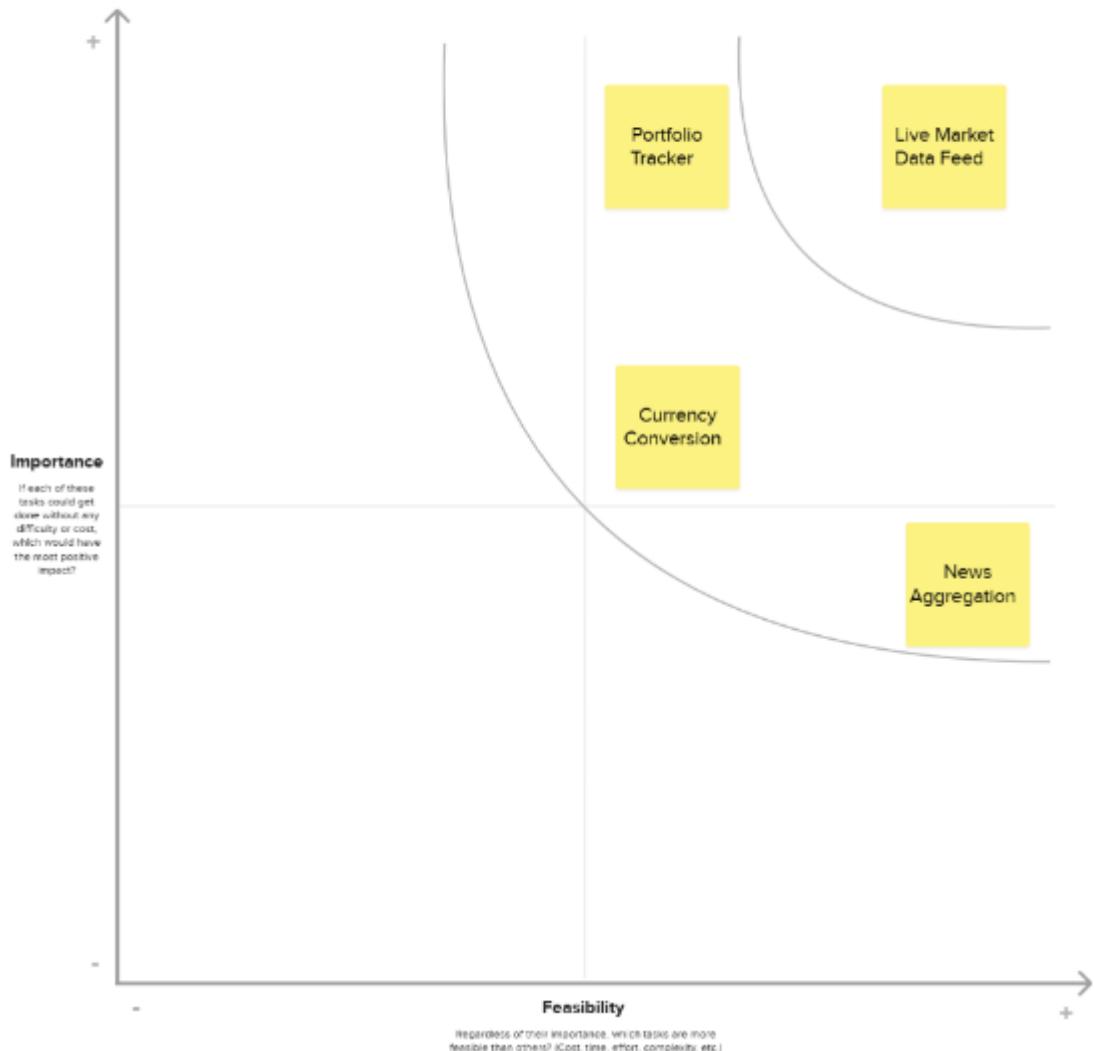
Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

⌚ 20 minutes

TIP

Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the H key on the keyboard.



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Ideation Phase

Define the Problem Statements

Date	5 March 2025
Team ID	SWTID1741267500153911
Project Name	Crypto-verse
Maximum Marks	2 Marks

Customer Problem Statement Template:

Create a problem statement to understand your customer's point of view. The Customer Problem Statement template helps you focus on what matters to create experiences people will love.

A well-articulated customer problem statement allows you and your team to find the ideal solution for the challenges your customers face. Throughout the process, you'll also be able to empathize with your customers, which helps you better understand how they perceive your product or service.

I am	Describe customer with 3-4 key characteristics - who are they?	Describe the customer and their attributes here
I'm trying to	List their outcome or "job" the care about - what are they trying to achieve?	List the thing they are trying to achieve here
but	Describe what problems or barriers stand in the way - what bothers them most?	Describe the problems or barriers that get in the way here
because	Enter the "root cause" of why the problem or barrier exists - what needs to be solved?	Describe the reason the problems or barriers exist
which makes me feel	Describe the emotions from the customer's point of view - how does it impact them emotionally?	Describe the emotions the result from experiencing the problems or barriers

Reference: <https://miro.com/templates/customer-problem-statement/>

Example:

I am	I'm trying to	But	Because	Which makes me feel
I am A crypto investor	I'm trying to Track real-time cryptocurrency prices	But Most platforms are complex or require logins	Because I need quick access to price updates without extra steps	Which makes me feel Frustrated and discouraged from using the platform

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	A crypto investor	Track real-time cryptocurrency prices	Most platforms are complex or require logins	I need quick access to price updates without extra steps	Frustrated and discouraged from using the platform
PS-2	A beginner in crypto	Understand market trends easily	The available dashboards are too technical	I need a simple, visually appealing interface to analyze data	Overwhelmed and unsure about making decisions
PS-3	A day trader	Monitor price fluctuations and make quick decisions	The API data is slow or not updating in real-time	I need instant updates to react to market changes quickly	Anxious and unable to trade efficiently
PS-4	A user tracking multiple coins	Compare different cryptocurrencies in one place	Most platforms focus on a few major coins	I want a customizable dashboard that lets me track my preferred assets	Limited and forced to use multiple apps

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Ideation Phase

Empathize & Discover

Date	
Team ID	SWTID1741267500153911
Project Name	Crypto-verse
Maximum Marks	4 Marks

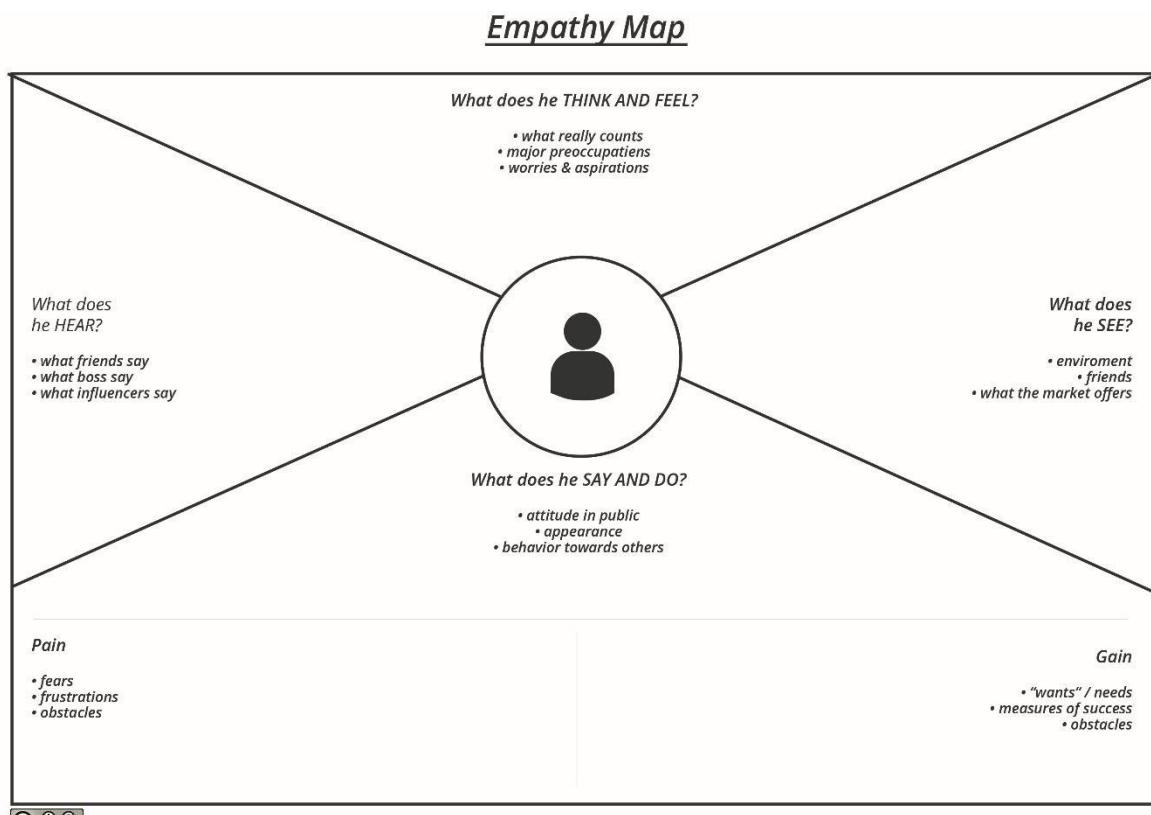
Empathy Map Canvas:

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviours and attitudes.

It is a useful tool to help teams better understand their users.

Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges.

Example:



Business Model **Toolbox**

Reference: <https://www.mural.co/templates/empathy-map-canvas>

**Says**

What have we heard them say?
What can we imagine them saying?

I need real-time price updates.

**Thinks**

What are their wants, needs, hopes, and dreams?
What other thoughts might influence their behavior?

Which coins should I monitor?



Shivan Kapoor
Crypto Investor

Checks market data frequently, compares trends.

Anxious about missing price movements.

**Does**

What behavior have we observed?
What can we imagine them doing?

[See an example](#)

**Feels**

What are their fears, frustrations, and anxieties?
What other feelings might influence their behavior?

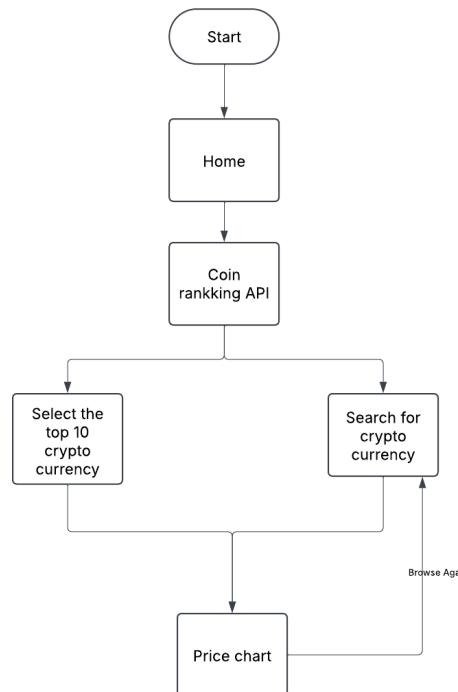
Project Design Phase-II

Data Flow Diagram & User Stories

Date	6 March 2025
Team ID	SWTID1741267500153911
Project Name	Crypto-verse
Maximum Marks	4 Marks

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



User Stories

Use the below template to list all the user stories for the product.

User Type	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Web user)	USN-1	As a user, I can search for crypto currencies, Price chart or All crypto currencies	I can access my account / dashboard	High	Sprint-1
Customer (Web user)	USN-2	As a user, I can view trending and top 10 crypto coins on home page	I can receive confirmation email & click confirm	High	Sprint-1
Customer (Web user)	USN-3	As a user, I can buy, sell and View the Crypto currencies	I can register & access the dashboard with Facebook Login	Low	Sprint-2

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	06 March 2025
Team ID	SWTID1741267500153911
Project Name	Crypto-verse
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Crypto Currencies and Discovery	Search for crypto currencies
		Top 10 crypto currencies on home page
FR-2	Price chart	You can see the price chart of specific crypto currency in it
FR-3	Admin Management	Manage Users and Accounts
		Monitor System Analytics

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The app should have an intuitive and user-friendly interface, ensuring smooth.
NFR-2	Security	API Requests must be secured. The app should prevent unauthorized .
NFR-3	Reliability	The app should ensure a consistent and uninterrupted experience, minimizing crashes and downtime.
NFR-4	Performance	Crypto currencies should load with minimal buffering. The app should respond to user interactions (search, price chart) within 2 seconds
NFR-5	Availability	The system should maintain an uptime of at least 99.9%, ensuring accessibility across different time zones.
NFR-6	Scalability	The app should handle increasing numbers of users and concurrent streams efficiently without performance degradation. The architecture should support future feature expansion.

Project Design Phase-II
Technology Stack (Architecture & Stack)
SWTID1741267500153911

Date	6 March 3035
Team ID	SWTID1741267500153911
Project Name	Crypto-verse
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web-based interface for crypto currency	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Top 10 crypto currency and data management	Java / Python
3.	Application Logic-2	All crypto currency and user search for selected currency	IBM Watson STT service
4.	External API-1	Fetching Coinranking API data	IBM Weather API, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Frontend frameworks	React.js, Node.js, ANTD, chart.js
2.	Scalable Architecture	Securing API calls and access controls	HTTPS, API key authentication (RapidAPI)

Project Planning Phase

Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)

Date	6 March 2025
Team ID	SWTID1741267500153911
Project Name	Crypto-verse
Maximum Marks	5 Marks

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	UI Setup	USN-1	Set up React.js project structure with necessary dependencies	7	High	Sidhartha
Sprint-1	Home Page & Navigation	USN-2	Create a homepage displaying top cryptocurrencies & trends	7	High	Sidhartha
Sprint-1	API Integration	USN-3	Fetch real-time cryptocurrency data from API & display on UI	6	High	Sidhartha
Sprint-2	Exercise Listing	USN-4	Dynamically list cryptocurrency data with price and volume	7	High	Sidhartha
Sprint-2	Exercise Details Page	USN-5	Create a detailed page showing price charts, market cap & trends	7	High	Sidhartha
Sprint-2	Filtering Feature	USN-6	Enable filtering of cryptocurrencies based on market cap, volume, and price changes	6	High	Sidhartha
Sprint-3	UI Enhancement	USN-7	Improve UI/UX with interactive charts and better styling	10	Medium	Sidhartha
Sprint-3	Error Handling	USN-8	Implement error handling for failed API request	10	Medium	Sidhartha
Sprint-4	Search Feature	USN-9	Allow users to search for cryptocurrencies by name.	10	High	Sidhartha
Sprint-4	Responsive Design	USN-10	Ensure responsiveness for mobile & tablet views	10	Medium	Sidhartha

Project Tracker, Velocity & Burndown Chart: (4 Marks)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	1 Mar 2025	2 Mar 2025	20	2 Mar 2025
Sprint-2	20	6 Days	3 Mar 2025	4 Mar 2025	20	4 Mar 2025
Sprint-3	20	6 Days	5 Mar 2025	6 Mar 2025	20	6 Mar 2025
Sprint-4	20	6 Days	7 Mar 2025	8 Apr 2025	20	8 Apr 2025

Project Design Phase
Problem – Solution Fit Template

Date	6 March 2025
Team ID	SWTID1741267500153911
Project Name	Crypto-verse
Maximum Marks	2 Marks

Problem – Solution Fit Overview:

The Problem-Solution Fit ensures that the identified problem aligns with the needs of users and that the proposed solution effectively addresses it. This concept helps developers, marketers, and business strategists validate the necessity and effectiveness of their solution before further development.

Purpose:

- Address the lack of a structured and real-time cryptocurrency tracking platform for users who seek updated market data, trends, and insights.
- Provide an intuitive and engaging experience for users to monitor cryptocurrency prices, market capitalization, and historical data without manual research.
- Offer seamless navigation and real-time data retrieval from a trusted cryptocurrency API to enhance user experience.
- Improve accessibility and engagement through an interactive UI, responsive design, and well-structured data flow.

Problem Statement:

Many cryptocurrency investors and enthusiasts struggle to find accurate, real-time, and well-organized market data. Existing platforms either require paid memberships, have cluttered interfaces, or provide outdated information, leading to poor decision-making in trading and investments.

Solution:

- A React.js-based Cryptocurrency Tracking Web Application that provides users with an easy-to-navigate interface to explore market trends, price changes, and coin details.
- Integration with a cryptocurrency API ensures users get up-to-date and detailed information on various digital assets.
- Axios-powered API requests ensure smooth data retrieval with minimal delays.
- Categorization, filtering, and search functionalities improve accessibility and user engagement.
- A scalable and responsive UI design ensures seamless experience across different devices, catering to both beginner and experienced traders.

Project Design Phase
Proposed Solution Template

Date	6 March 2025
Team ID	SWTID1741267500153911
Project Name	Crypto-verse
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Many users struggle to find real-time, structured, and reliable cryptocurrency market data. Existing platforms either require paid memberships, lack intuitive interfaces, or fail to provide accurate real-time insights, making investment decisions challenging.
2.	Idea / Solution description	Many users struggle to find real-time, structured, and reliable cryptocurrency market data. Existing platforms either require paid memberships, lack intuitive interfaces, or fail to provide accurate real-time insights, making investment decisions challenging.
3.	Novelty / Uniqueness	Free, structured, and real-time access to categorized cryptocurrency data with an intuitive and user-friendly interface. Advanced filtering and personalized watchlists enhance user experience.
4.	Social Impact / Customer Satisfaction	Provides accessibility to real-time financial data, empowering users to make informed investment decisions. Reduces reliance on paid platforms, promoting financial inclusivity and transparency in the crypto space.

Project Design Phase
Solution Architecture

Date	6 March 2025
Team ID	SWTID1741267500153911
Project Name	Crypto-verse
Maximum Marks	4 Marks

Solution Architecture:

The solution architecture for the Cryptocurrency Tracking Application ensures a scalable, efficient, and user-friendly platform for tracking real-time cryptocurrency market data, trends, and analytics.

Goals of the Solution Architecture:

Identify the Best Tech Solution:

- Utilize modern front-end frameworks (React.js) and APIs (RapidAPI, CoinGecko) to provide a seamless and interactive crypto market tracking experience.

Define Structure & Characteristics:

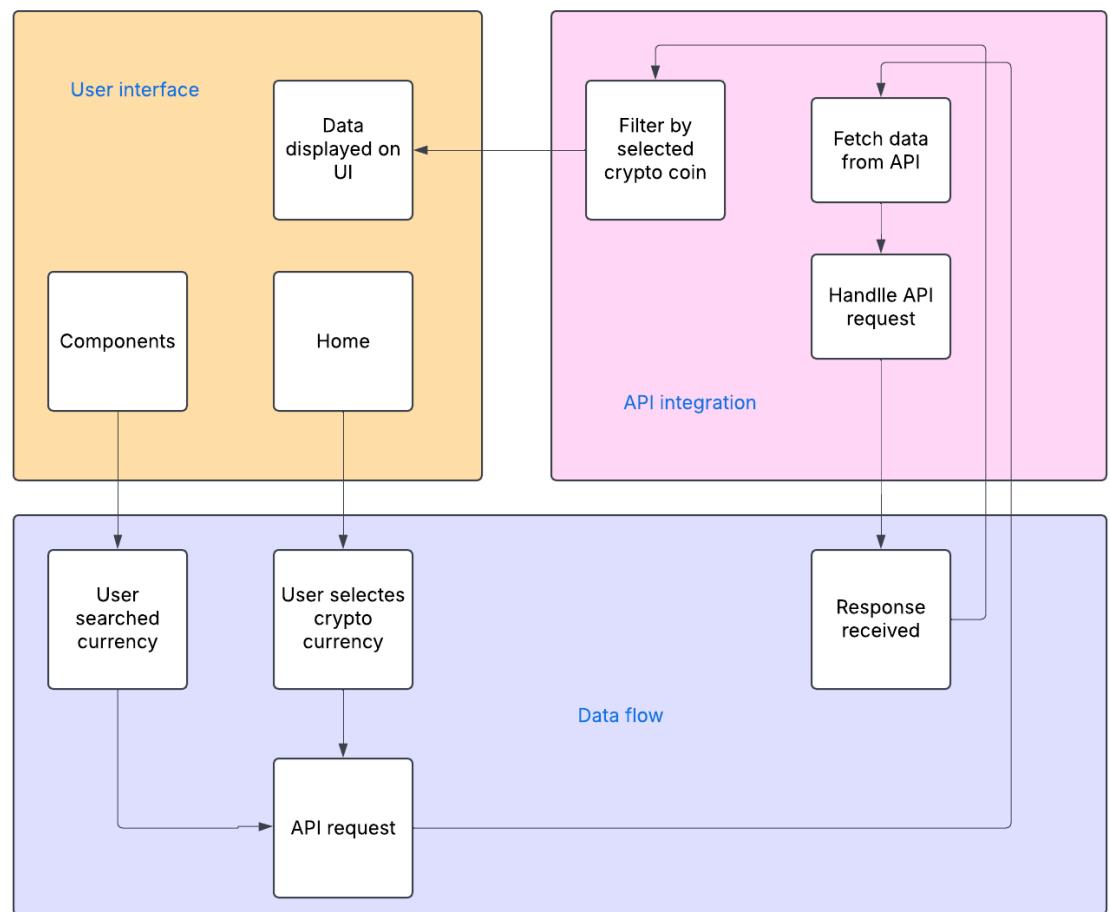
- Ensure a modular, scalable, and maintainable software architecture that supports future feature enhancements like AI-based price predictions and DeFi analytics.

Outline Features & Development Phases:

- Clearly define project milestones, including UI/UX design, API integration, database structuring, and deployment strategy.

Establish Specifications for Development & Delivery:

- Provide well-defined guidelines for system architecture, API integrations, data flow, and real-time data handling.
- Implement a high-performance backend to support large-scale user requests without delays.



User Acceptance Testing (UAT) Template

Date	6 March 2025
Team ID	SWTID1741267500153911
Project Name	Crypto-Verse
Maximum Marks	

Project Overview

- 📍 **Project Name:** CryptoVerse
- 📍 **Project Description:** A React-based cryptocurrency tracking application that allows users to search, track, and analyse real-time cryptocurrency market data using a third-party API. Features include real-time price updates, coin details, filtering, and user-friendly UI/UX.
- 📍 **Project Version:** v1.0
- 📍 **Testing Period:** March 1, 2025 - March 8, 2025

Testing Scope

Features and Functionalities to be Tested

- Home Page & Navigation
- Cryptocurrency Search & Discovery
- API Integration for Real-Time Data
- Filtering Coins by Market Cap, Volume, and Price Changes
- Viewing Coin Details with Charts & Historical Data
- UI/UX Testing (Responsiveness, Icons, Styling)
- Error Handling & Performance Testing

User Stories or Requirements to be Tested

- 📍 Searching & Viewing Cryptocurrency Details
- 📍 Filtering Cryptocurrencies by Market Cap, Volume, and Trends
- 📍 Displaying Coin Details with Price Charts & Market Insights
- 📍 Responsive UI across Mobile, Tablet, and Desktop
- 📍 Handling API Errors Gracefully

Test Cases

Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result	Pass/Fail
TC-001	Load Homepage	<ol style="list-style-type: none">Open the applicationHomepage loads	Homepage should display market trends, top cryptocurrencies.	[Actual Result]	[Pass/Fail]

TC-002	Search for a Cryptocurrency	1. Enter a coin name in search 2. Click search	Matching cryptocurrencies should be displayed	[Actual Result]	[Pass/Fail]
TC-003	View Coin Details	1. Click on a coin 2. View details (price chart, volume, historical data)	Coin details should be displayed correctly	[Actual Result]	[Pass/Fail]
TC-004	Mobile Responsiveness	1. Open the app on a mobile device 2. Navigate through pages	UI should be responsive and properly displayed	[Actual Result]	[Pass/Fail]

Bug Tracking

Bug ID	Bug Description	Steps to Reproduce	Severity	Status	Additional Feedback
BG-001	Search results take too long to load	1. Search for a cryptocurrency 2. Observe slow response time	High	Open	Need API response optimization
BG-002	Filtering feature not working correctly	1. Select a filter option 2. Observe incorrect results	Medium	In Progress	Filtering logic needs debugging
BG-003	UI overlaps on small screen devices	1. Open app on small devices (iPhone SE) 2. Observe UI distortion	Low	Open	Adjust CSS for better responsiveness

Sign-off

Tester Name: [Enter Name]

Date: [Enter Date of Completion]

Signature: [Enter Signature]

Notes

- Ensure testing covers both positive & negative cases

- Bug tracking should include severity levels & reproduction steps
- Final sign-off required before deployment